Document made available under the Patent Cooperation Treaty (PCT)

International application number: PCT/DK05/000008

International filing date: 10 January 2005 (10.01.2005)

Document type: Certified copy of priority document

Document details: Country/Office: EP
Number: 04388003.8
Filing date: 09 January 2004 (09.01.2004)

Date of receipt at the International Bureau: 09 February 2005 (09.02.2005)

Remark: Priority document submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b)

World Intellectual Property Organization (WIPO) - Geneva, Switzerland
Organisation Mondiale de la Propriété Intellectuelle (OMPI) - Genève, Suisse

PCT/DK05/00008

Europäisches Patentamt | European Patent Office | Office européen des brevets

Bescheinigung | Certificate | Attestation

Die angehefteten Unterlagen stimmen mit der ursprünglich eingereichten Fassung der auf dem nächsten Blatt bezeichneten europäischen Patentanmeldung überein.

The attached documents are exact copies of the European patent application described on the following page, as originally filed.

Les documents fixés à cette attestation sont conformes à la version initialement déposée de la demande de brevet européen spécifiée à la page suivante.

Patentanmeldung Nr. | Patent application No. | Demande de brevet n°

04388003.8

Der Präsident des Europäischen Patentamts;
Im Auftrag

For the President of the European Patent Office

Le Président de l'Office européen des brevets
p.o.

R C van Dijk

Anmeldung Nr:
Application no.: 04388003.8
Demande no:

Anmeldetag:
Date of filing: 09.01.04
Date de dépôt:

Anmelder/Applicant(s)/Demandeur(s):

FIBERLINE A/S
Nr. Bjertvej 88
DK-6000 Kolding
DANEMARK

Bezeichnung der Erfindung/Title of the invention/Titre de l'invention:
(Falls die Bezeichnung der Erfindung nicht angegeben ist, siehe Beschreibung.
If no title is shown please refer to the description.
Si aucun titre n'est indiqué se referer à la description.)

A building element and a building structure made from a plurality of building elements

In Anspruch genommene Priorität(en) / Priority(ies) claimed /Priorité(s) revendiquée(s)
Staat/Tag/Aktenzeichen/State/Date/File no./Pays/Date/Numéro de dépôt:

Internationale Patentklassifikation/International Patent Classification/
Classification internationale des brevets:

E06B3/54

Am Anmeldetag benannte Vertragstaaten/Contracting states designated at date of filing/Etats contractants désignées lors du dépôt:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE SI SK TR LI

The present invention relates generally to the technical field of building structures and in particular to a novel building element and a building structure made from a plurality of building elements.

Within the technical field of building elements, prior art patent applications describing building elements to be included in the building of a house or office building are known. The publications include WO 86/05224, WO 95/23270, WO 99/23344, WO 00/05474, WO 01/25581, WO 02/096623, US 4,994,309, US5,727,356, US 6,401,428, US 2002/0069600, US 2003/0037493, US 6,591,557 and EP 0 328 823.

Previously, when constructing a building or part of a building such as a front, facade or shop front, methods including building a skeleton or framework of aluminium or steel as the loadcarrying part have been used. E.g. when constructing an office building having a large facade in glass, a metal framework carrying the entire load of the facade was constructed, and on this steel skeleton fixtures were mounted for fixating and holding window panes. The present invention provides a highstrength building element having good thermal insulating properties.

Pultruded fibre glass framing sections have been described previously in patent publications such as US 5,647,172 and EP 0 517 702. The pultruded elements described in these publications are of relatively high complexity and do now allow for multiple elements to be mounted directly together to form structures such as glass facades of buildings.

Building elements comprising pultruded elements have also been described previously in publications such as WO 91/19863 and WO 00/45003.

The above-mentioned US publications are hereby incorporated in the present description by reference.

The applicant company is a world-wide leading manufacturer of pultruded structures and has delivered pultruded profiled elements for the building of e.g. bridges and also houses such as the Fiberline Bridge located in Kolding in Denmark and the Eye Catcher building built in Zurich in Switzerland. The advantageous properties of pultruded structural elements as to bearing capability, strength, low weight and further thermal insulating properties is well documented within the industry, e.g. in the manuals delivered by the manufacturers of profiled pultruded elements and in particular by the applicant company including the online design manual available from the applicant company.

It is an object of the present invention is to provide a novel technique of building houses by means of a novel building element which is made from highstrength and lightweight elements, in particular a glass panel and highly insulating pultruded elements.

The basis for the present invention is the realisation that pultruded bodies provided a specific content of fibre material and a specific selection of fibre material be made may be combined with highstrength hardened glass panels for providing highstrength and highly stable building elements which may stand exposure to temperature variation without giving origin to excessive stresses in the joints between the materials being glass panels and pultruded bodies.

It is an advantage of the present invention that the novel technique of building building elements from a combination of integrally joined glass panels and profiled pultruded bodies renders it possible to manufacture large glass panel elements and further in a particular aspect renders it possible to integrally manufacture a glazed window from a single profiled pultruded body constituting the distance element and also the frame of the window element in which the glass panel constitutes a window pane.

In the present context, the expression glass panel is used as a generic term covering a sheet-like glass element used in a specific structure such as a building

element or window element and may in some applications constitute an element similar to the structural element conventionally known as a window pane.

The above object and the above advantage together with numerous other objects, advantages and features which will be evident from the below detailed description of the present invention is according to a first aspect of the present invention obtained by a building element comprising:

a glass panel defining an outer circumferential rim including at least two rectilinear segments, a first one of which defines a first length and a second one of which defines a second length, the glass panel being made of hardened glass and having a specific coefficient of thermal expansion,

a first pultruded element having a length corresponding to the first length,

a second pultruded element having a length corresponding to the second length,

the first and second pultruded elements being adhered in a highstrength integral adhesion to the hardened glass panel along the first and second rectilinear segments, respectively, and

the pultruded elements having a content of reinforcing glass fibres for providing a coefficient of thermal expansion of the pultruded elements substantially corresponding to the specific coefficient of thermal expansion.

According to the basic teachings of the present invention, a high strength building element is produced from the combination of a glass panel made from hardened glass constituting a structurally load-bearing element and two or more pultruded elements having coefficient of thermal expansion substantially corresponding to the coefficient of thermal expansion of glass, thereby allowing the pultruded elements to be integrally joined to the glass panel without causing excessive thermal stresses in the joint or in either of the two materials, viz. the glass panel or the pultruded elements. The correspondence between the coefficients of thermal expansion of the fibres and the glass panel and the high content of the fibres having coefficient of thermal expansion substantially corresponding to the coefficient of thermal expansion of glass allows the pultruded elements including a solidified resin and the

reinforcing fibres to have a combined resulting coefficient of thermal expansion substantially corresponding to the coefficient of thermal expansion of the glass panel.

As indicated above, any fibre material exhibiting a coefficient of thermal expansion substantially corresponding to the coefficient of thermal expansion of glass may be used as the reinforcing fibre material provided the reinforcing fibre material exhibits adequate and sufficient strength and stiffness. At present the preferred fibre reinforcing fibres having a coefficient of thermal expansion identical to glass are as already mentioned glass fibres.

Within the technical field of pultrusion, many different fibres have been used, in particular glass fibres, carbon fibres and kevlar fibres. In the present context, glass fibres are preferably used, however, in specific applications, additional fibres such as carbon fibres, kevlar fibres or natural fibres may be added used in addition to the glass fibres.

In the present context, the fulfilment of the requirement of substantial correspondence between the coefficient of thermal expansion of the reinforcing fibres and the glass and further between the combined pultruded elements and the glass panel depends on the actual application of the building element such as the temperature variation to which the building element is to be exposed and further the dimensions of the building element. However, it is contemplated that the fulfilment of the criteria of substantial correspondence between the coefficient of thermal expansion be any difference between the coefficient of thermal expansion being less than 40%, such as 10% - 40%, e.g. 20%, preferably approximately 5% - 10%, 10% - 15%, 15% - 20%, 20% - 25%, 25% - 30%, 30% - 35% or 35% - 40%.

According to the presently preferred embodiment of the building element according to the first aspect of the present invention, the content of reinforcing fibres, preferably being constituted by glass fibres, is larger than 40%, such as 40% - 50%, 50% - 60%, 60% - 70%, 70% - 80%, 80% - 90%, 90% - 95%, preferably 50% - 80% such as 60% - 70%, all percentages by weight.

It is to be understood that the content of reinforcing fibres to some extent depend on the coefficient of thermal expansion of the solidified or hardened resin as a resin having a coefficient of thermal expansion highly different from the coefficient of thermal expansion of glass may necessitate the use of a higher content of reinforcing fibres. The resin used in according with the teachings of the present invention is preferably a polyester resin, however, as is well known within the art of pultrusion, also vinyl ester, phenols and epoxy resin may be used for the pultrusion process.

For most applications of the building element constituting a first aspect of the present invention, the glass panel is of a rectangular configuration, however, the technique of providing a building element as taught by the present invention is by no means limited to the geometrical configuration of a rectangular panel as triangular panels, polygonal panels etc. may be manufactured in accordance with the teachings of the present invention.

For some applications, additional pultruded elements made form the same materials and having the same reinforcing fibre content as the first and second pultruded element may be used for providing a circumferential frame e.g. in a rectangular building element as the first and second pultruded elements are positioned along the longer sides of the rectangular hardened glass panel and the additional pultruded elements are positioned along the short sides of the rectangular, hardened glass panel.

The adhesion of the pultruded element or elements to the hardened glass panel may be established by means of any appropriate adhesive material taking into consideration the thermal stresses to be transferred from the glass panel to the pultruded elements or vice versa. It is contemplated that PU adhesives or alternatively epoxy resins may be used for the fixation of the pultruded elements along the rectilinear segments of the glass panel according to the teachings of the present invention.

The technique of providing a building element as discussed above allows the building element to be converted into an integrally glazed window structure in which the two or more pultruded elements constitute a window frame and in which a further glass panel made from non-hardened glass or alternatively hardened glass is positioned in spaced apart relationship relative to the hardened glass panel by means of distance elements which may be constituted by conventional aluminium or stainless steel distance elements or alternatively constituted by extensions of pultruded elements.

In the glazed window structure constituting a further embodiment of the building element according to the present invention, the pultruded elements may extend from the front window pane or alternatively from the rear window pane when considering the window structure as a window facing the exterior of a building.

In the present specification all terms such as 'up', 'down', 'vertical', 'horizontal', 'front', 'rear' etc. are to be construed in the context of the intentional application of the structural elements in question and by no means to be referred to as limiting definitions of orientations referring to e.g. the orientations of elements during the process of manufacturing the building element.

Provided the integral glazed window structure is to be produced from the profiled pultruded elements having extensions constituting the distance elements of the glazed window, a gas tight seal is preferably further applied to the extensions of the pultruded elements for providing a gas tight sealing between the two glass panels constituting window panes of the glazed window structure.

The above object and the above advantage together with numerous other objects, advantages and features which will be evident from the below detailed description of the present invention is according to a second aspect of the present invention obtained by a building structure having a facade or a part of a facade made from a plurality of building elements each having any of the features of the building element and being assembled into a composite multi-element structure including elements extending horizontally and elements extending vertically.

The present invention is now to be further described with reference to the drawings, in which

Fig. 1 is a perspective, schematic and partly cutaway view of a first embodiment of a panel or window structure constituting a first embodiment of a building element according to the present invention,

Fig. 2a is a sectional view of a first modified version of the first embodiment of the building element shown in Fig. 1,

Fig. 2b is a sectional view similar to the view of Fig. 2a illustrating a second modified version of the building element according to the present invention,

Fig. 2c is a sectional view similar to the views of Figs. 2a and 2b illustrating a third modified version of the building element according to the present invention,

Fig. 3 is a perspective, schematic and partly cutaway view illustrating a technique of assembling two building elements identical to the building element shown in Fig. 1 into a building structure providing a lightweight and highstrength building structure, and

Fig. 4 is a perspective, schematic and partly cutaway view illustrating a technique of assembling the first and second modified versions shown in Figs. 2a and 2b, respectively, of the building element into a self-supporting building structure by means of an arresting U-shaped element.

In Fig. 1, a first embodiment of a building element according to the present invention is shown designated the reference numeral 10 in its entirety. The building element may constitute a wall element, a facade element or a window element of a building structure exhibiting extremely lightweight, highstrength and high thermal insulating properties.

Basically, the building element is composed of three elements, viz. a glass panel 16 and two lightweight and highstrength pultruded bodies 12 and 14 which are made from a resin such as a polyester or epoxy resin having a high content of glass fibres for providing a coefficient of thermal expansion of the profiled bodies substantially corresponding to the coefficient of thermal expansion of glass. The two pultruded

bodies 12 and 14 may be of identical configuration such as the shape of a rod or may alternatively have profiled configuration for allowing the bodies to be joined to additional building elements or serving as structural elements in which channels may be provided for e.g. electrical cables or optical wires, e.g. for the main supply, for computer networks, for signalling applications, telecommunication applications, etc. or alternatively for conducting water or air.

The glass panel 16 is made from hardened glass and which adhered by means of a high strength adhesive such as epoxy or PU adhesive to the front edges of the pultruded bodies 12 and 14 so as to position the outer edges of the pultruded bodies 12 and 14 in continuation of the vertical edges of the glass panel 16.

The adhesive function between the pultruded body 12 and the glass panel 16 is designated the reference numeral 18, and the adhesive junction between the pultruded body 14 and the glass panel 16 is designated the reference numeral 20.

The glass panel 16 together with the two pultruded bodies 12 and 14 constitute an integral lightweight, highstrength and highly stable building element in which the glass panel is used as structural element rather than a simple decorative or light transparent glass panel. The correspondence between the coefficients of thermal expansion of the pultruded bodies 12 and 14 and the glass panel 16 allows the building element to be subjected to thermal variation provided the glass panel constitutes an outer glass panel as the temperature varies from night to day and from winter to summer.

The glass panel 16 preferably constitutes the one panel of a two or three-ply glazed window as the glass panel 16 is jointed to a further glass panel 22 by means of two distance bodies 24 and 26. The two glass panels 16 and 22 together with the distance bodies 24 and 26 constitute the structure of a conventional glazed window. Whereas the glass panel 16 is made of hardened glass for obtaining the adequate strength and load carrying capability of the panel within the building element structure, the glass panel 22 need not be made from a hardened glass material.

The distance bodies 24 and 26 are preferably made from stainless steel or aluminium and are adhered to the sandwiching glass panels 16 and 22 by means of an adhesive material such as epoxy, PU adhesive or silicone. The inner volume defined between the two glass panels 16 and 22 may be pressurised or evacuated dependent on the size of the panels and also the properties of the glass panels used.

In Fig. 2a, a detail of a first modified version of the first embodiment of the building element 10 shown in Fig. 1 is illustrated which modified version is designated the reference numeral 10' in its entirety. In the below description, components or elements identical to components or elements, respectively, previously described are designated the same reference numeral as previously used, whereas components or elements serving the same purpose as components or elements, respectively, described previously, however, geometrically are differing from the previously described components or elements, respectively, are designated the same reference integer, however added a sign for marking the geometrical difference. In Fig. 2a, the modified version differs from the above described first embodiment 10 shown in Fig. 1 in that the glass panel 16' is of a somewhat enlarged size or width providing an overhang relative to the pultruded body 12. Consequently, provided the version 10' shown in Fig. 2a is used in an assembly as is to be described below with reference to Fig. 3, a spacing is established between the two pultruded bodies 12.

In Fig. 2b, a second modified version 10" of the building element is shown differing from the above described first embodiment in that the pultruded body 12 shown in Fig. 1 is substituted by a broader pultruded body 12' providing an overhang relative to the edge of the glass panel 16.

In Fig. 2c, a third modified version of the building element 10 shown in Fig. 1 is illustrated in which building element the pultruded body 12 and the distance body 24 are integrated into a single pultruded L-shaped body 28 having a major flange constituting a part similar to the pultruded body 12 and a minor flange serving the purpose as a distance body or element relative to the two sandwiching glass panels

16 and 22. In the glazed window structure shown in Fig. 2c, an aluminium foil or similar gas tight foil is used which foil is designated the reference numeral 30 and serves the purpose of preventing gas from migrating through the material of the pultruded body 28 which is not a gas tight material as distinct from an aluminium foil. The aluminium foil 30 is further glued to the opposing faces of the glass panel 16 and 22 at the outer edges thereof for providing a gas tight, glazed window structure.

The building element or window element 10 shown in Fig. 1 is preferably used in a building structure for establishing a self-supporting, lightweight and highstrength facade as is illustrated in Fig. 3.

In Fig. 3, two building elements 10 are shown which are joint together by means of bolts and nuts, one bolt being designated the reference numeral 32 and the one nut being designated the reference numeral 34 as the bolts and nuts are positioned and received in through-going bores 36 and 38 of the pultruded bodies 12 and 14, respectively, which through-going holes or cores are also shown in Fig. 1. The pultruded body 14 of the left-hand building element 10 and the pultruded body 12 of the right-hand building element 10 are kept in spaced apart relationship by means of an inter-layered or sandwiched insulating layer 40 which may be made from foamed material or mineral-fibre material. At the front face, the glass panel 16 of the two building elements 10 are joined by means of a flexible adhesive sealing such as silicone sealing 42. Obviously, the technique of assembling the two building elements or window elements 10 shown in Fig. 3 may be modified in numerous ways by the use of additional or alternative connecting joining components such as by means of separate joining elements, extruded facade decorative elements or as mentioned above additional panel elements, e.g. serving as channels for the receipt of e.g. mains supply cables, communication or network cables, fibre optic cables or air-condition ducts or water channels.

In Fig. 4, an alternative technique of assembling the two adjacent building panels is shown as in Fig. 4, the building element 10' shown in Fig. 2a is joined to the building element 10" shown in Fig. 2b as the two building elements are positioned and adjoined side by side by means of a U-shaped element 44 which may be further

fixated relative to the pultruded bodies 12 and 12' of the building elements 10' and 10", respectively, by means of screws, bolds or nuts or revits, etc.

A prototype embodiment of a building element 10 shown in Fig. 1 was made from the following components. The glass panel 16 was made from 4 mm hardened glass measuring 40 cm x 40 cm. The glass panel 22 was made from 4 mm non-hardened glass measuring 40 cm x 37,8 cm. The distance elements 22 and 24 were made from 12 mm x 12 mm aluminium profiles which were adhered to the sandwiching glass panel 16 and 22 by means of UV resistant silicone. The pultruded bodies 12 and 14 were constituted by two bodies of a length of 40 cm made from a 10 mm x 100 mm pultruded profile made from polyester having a content of glass fibres of approximately 60% by weight.

The above described technique of providing a self-supporting lightweight and highstrength building element by means of co-operating pultruded bodies having a high content of glass fibres for generating a pultruded body having a coefficient of thermal expansion substantially corresponding to the coefficient of thermal expansion of glass and a hardened glass panel may be modified in numerous ways e.g. by further providing additional pultruded elements or bodies positioned at the top and bottom edges of the glass panel. In the above-described embodiments shown in Figs. 3 and 4, it is contemplated that the pultruded bodies 12 and 14 constitute vertical supporting bars, however, in an alternative application of the technique according to the present invention, the pultruded bodies may serve as horizontal bars or alternatively a total of four pultruded bodies constituting vertical and horizontal bars may be used, which bars together constitute a circumferential frame which is adhered to the outer glass panel 16. The technique of adhering frame made from pultruded bodies having a coefficient of thermal expansion substantially corresponding to the coefficient of thermal expansion of glass due to the high content of glass fibres within the pultruded bodies may be further employed in integral window structures being single glass layer window structures or two layer or three layer glazed windows having an integral window frame.

The above-mentioned modifications and numerous other modifications and variants which will be evident to a person having ordinary skill within the art, are contemplated to be part of the present invention as defined in the appending patent claims.

5

CLAIMS

1. A building element comprising:

a glass panel defining an outer circumferential rim including at least two rectilinear segments, a first one of which defines a first length and a second one of which defines a second length, said glass panel being made of hardened glass and having a specific coefficient of thermal expansion,

a first pultruded element having a length corresponding to said first length,

a second pultruded element having a length corresponding to said second length,

said first and second pultruded elements being adhered in a highstrength integral adhesion to said hardened glass panel along said first and second rectilinear segments, respectively, and

said pultruded elements having a content of reinforcing fibres for providing a coefficient of thermal expansion of said pultruded elements substantially corresponding to said specific coefficient of thermal expansion.

2. The building element according to claim 1, said fibres being glass fibres.

3. The building element according to any of the claims 1-2, the difference between the coefficient of thermal expansion of said pultruded elements and said specific coefficient of thermal expansion being less than 40%, such as 10% - 40%, e.g. 20%, preferably approximately 5% - 10%, 10% - 15%, 15% - 20%, 20% - 25%, 25% - 30%, 30% - 35% or 35% - 40%.

4. The building element according to any of the claims 1-3, the content of fibres of said pultruded elements being more than 40%, such as 40% - 50%, 50% - 60%, 60% - 70%, 70% - 80%, 80% - 90%, 90% - 95%, preferably 50% - 80% such as 60% - 70%, all percentages by weight.

5. The building element according to any of the claims 1-4, said first and second pultruded elements being adhered to said glass panel by means of a PU adhesive or alternatively and preferably an epoxy adhesive.

6. The building element according to any of the claims 1-5, said glass panel being a rectangular panel and said first and second rectilinear segments constituting the opposite longer sides of said rectangular hardened glass panel.

7. The building element according to claim 6, further comprising two additional pultruded elements made from the same materials and having the same reinforcing glass fibre content as said first and second pultruded elements and being adhered to the short sides of said rectangular, hardened glass panel.

8. The building element according to any of the claims 1-7, further comprising a further glass panel made from non-hardened glass and positioned in space apart relationship relative to said hardened glass panel by means of distance elements for providing a glazed window.

9. The building element according to claims 7 and 8, said distance elements being constituted by extensions of said pultruded elements.

10. The building element according to claim 9, further including a gas tight foil such as an aluminium foil for gas tight sealing said non-hardened glass panel relative to said hardened glass panel.

11. A building structure having a facade or a part of a facade made from a plurality of building elements each having any of the features of the building element according to any of the claims 1-10 and being assembled into a composite multi-element structure including elements extending horizontally and elements extending vertically.

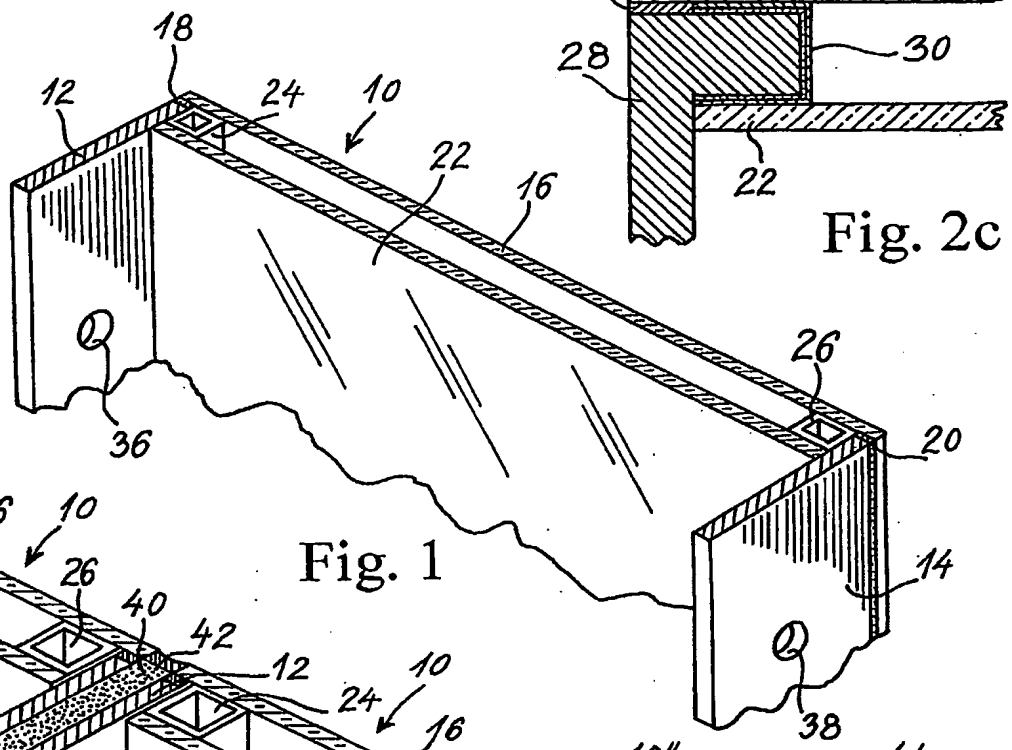

Fig. 1

Fig. 2c

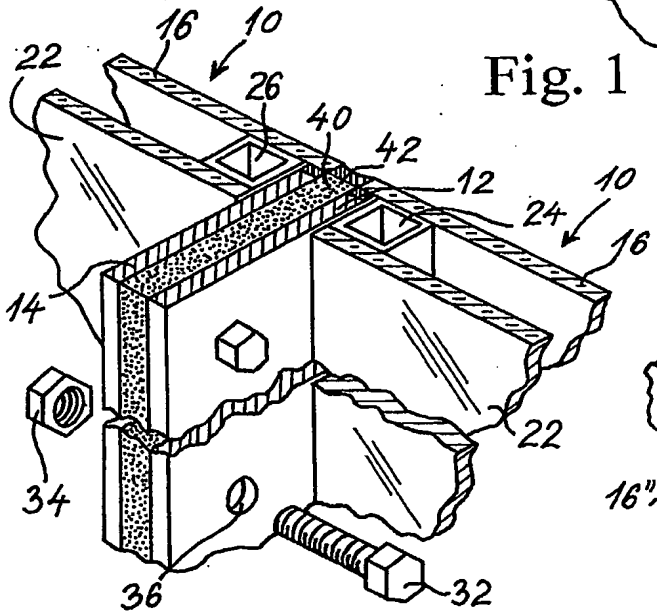

Fig. 3

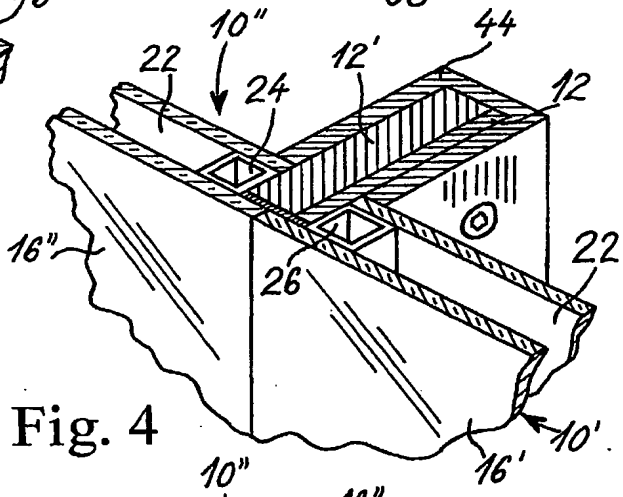

Fig. 4

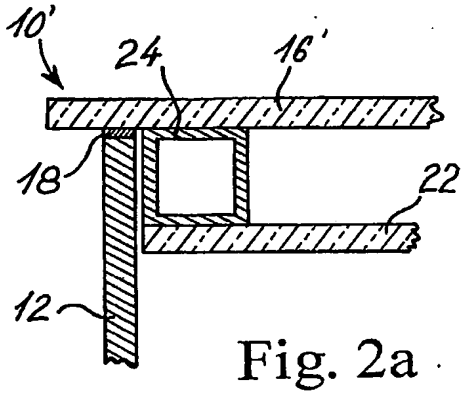

Fig. 2a

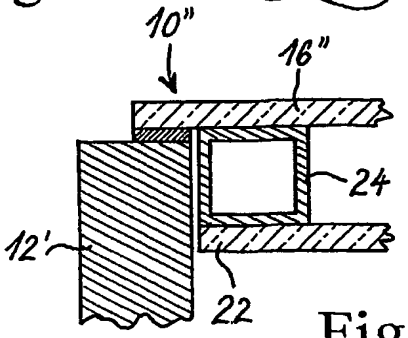

Fig. 2b

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

NIELSEN, Henrik, Sten
Budde, Schou & Ostenfeld A/S
DK-1601 Copenhagen V
DANEMARK

Date of mailing *(day/month/year)* 14 February 2005 (14.02.2005)	
Applicant's or agent's file reference 121437/HN/ME	**IMPORTANT NOTIFICATION**
International application No. PCT/DK05/000008	International filing date *(day/month/year)* 10 January 2005 (10.01.2005)
International publication date *(day/month/year)*	Priority date *(day/month/year)* 09 January 2004 (09.01.2004)
Applicant FIBERLINE A/S et al	

1. By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).

2. *(If applicable)* The **letters "NR"** appearing in the right-hand column denote **a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau** under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

3. *(If applicable)* **An asterisk (*)** appearing next to a date of receipt, in the right-hand column, denotes **a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b)** (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

Priority date	Priority application No.	Country or regional Office or PCT receiving Office	Date of receipt of priority document
09 January 2004 (09.01.2004)	04388003.8	EP	09 February 2005 (09.02.2005)
05 March 2004 (05.03.2004)	04388015.2	EP	09 February 2005 (09.02.2005)

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. +41 22 740 14 35

Authorized officer

Olaiz Alicia

Facsimile No. +41 22 338 71 30
Telephone No. +41 22 338 9288